

# Outer Rear View Mirror Image Vibration While Driving

**Service Category** Vehicle Exterior

**Section** Mirror (ext)

**Market** USA

Toyota Supports  
ASE Certification 

## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2019 - 2021	RAV4, RAV4 HV	

### REVISION NOTICE

**December 09, 2020 Rev1:**

- **Applicability has been updated to include 2021 model year RAV4 and RAV4 Hybrid vehicles. Any previous printed versions of this bulletin should be discarded.**

## Introduction

Some 2019 – 2021 model year RAV4 and RAV4 Hybrid vehicles may exhibit a vibration/shaking of the image shown in the outer rear-view mirror(s) while driving. Mirror vibration can be observed at highway speeds of approximately 50 – 70 mph on typical concrete/asphalt road surfaces. Follow the Repair Procedure in this bulletin to improve this condition.

## Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
BD1922	Remove Mirror, Replace Mirror Mounting Studs, Install New Exterior Door Reinforcement Bracket, Apply Panel Bonding Adhesive, and Reinstall Mirror	2.0	87910-***** 87940-*****	9B	40
Combo A	Opposite Side	2.0			

\*Warranty claim MUST be submitted with the correct 10-digit OFF. Choose the correct OFF for the vehicle being repaired by searching for the parts in the Electronic Parts Catalog using the VIN filter.

### APPLICABLE WARRANTY

- **This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.**
- **Warranty application is limited to occurrence of the specified condition described in this bulletin.**

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### Parts Information

PART NUMBER	PART NAME	QTY
04000-0310R	Extension Kit, FR Door Inside Panel Reinforcement, RH	1
04000-0320R	Extension Kit, FR Door Inside Panel Reinforcement, LH	

### Required Tools & Equipment

REQUIRED EQUIPMENT	PART NUMBER	QTY
3M™ Manual 200 mL Cartridge Applicator Gun	3M-08571	1
3M™ Panel Bonding Adhesive	3M-08115	1
Loctite® 242® Threadlocker, 10 mL Bottle, Blue	24221	1

### Repair Procedure

1. Confirm the condition exists.

Does the vehicle exhibit a vibration/shaking of the image shown in the outer rear-view mirror(s) while driving at highway speeds of approximately 50 – 70 mph on typical concrete/asphalt road surfaces?

- **YES** — Continue to step 2.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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### Repair Procedure (continued)

2. Remove the outer rear-view mirrors from the door.

#### NOTE

Both exterior rear-view mirrors are to be repaired under this Service Bulletin.

Refer to TIS, applicable model and model year Repair Manual:

- 2019 – 2021 RAV4:  
*Vehicle Exterior – Mirror (ext)* – [“Mirror \(Ext\): Outer Rear View Mirror: Removal”](#)
- 2019 – 2021 RAV4 Hybrid:  
*Vehicle Exterior – Mirror (ext)* – [“Mirror \(Ext\): Outer Rear View Mirror: Removal”](#)

3. Remove and replace the mirror mounting stud bolts with the NEW stud bolts.

Refer to the instruction video link:

[Mirror Bolt Replacement Instruction Video](#)

#### NOTE

- The NEW stud bolts are included in the NEW extension kit package (04000-031/20R).
- Protect the mirror housing from damage when replacing the stud bolts.
- Place a shop towel under the mirror housing to protect it from damage.

- A. Remove the three original mirror stud bolts.

**Figure 1.**



**1**

**Original Stud Bolts**

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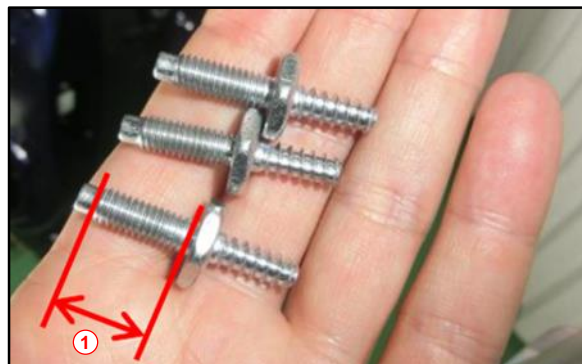
### Repair Procedure (continued)

B. Install the NEW, longer stud bolts.

#### NOTE

- The original stud bolt thread length is 12 mm.
- The NEW, longer stud bolt thread length is 20 mm.

**Figure 2.**



**1** Longer Thread Length (20 mm)

(1) Fasten the shorter side of the stud bolts to the mirror base.

#### NOTE

BEFORE inserting the longer stud bolts, apply Loctite® type 242 to each bolt.

**Figure 3.**



(2) Tighten ALL three bolts.

**Torque: 3.3 N\*m (33.65 kgf\*cm,  
29.2 in\*lb / ft\*lb)**

**Figure 4.**



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### Repair Procedure (continued)

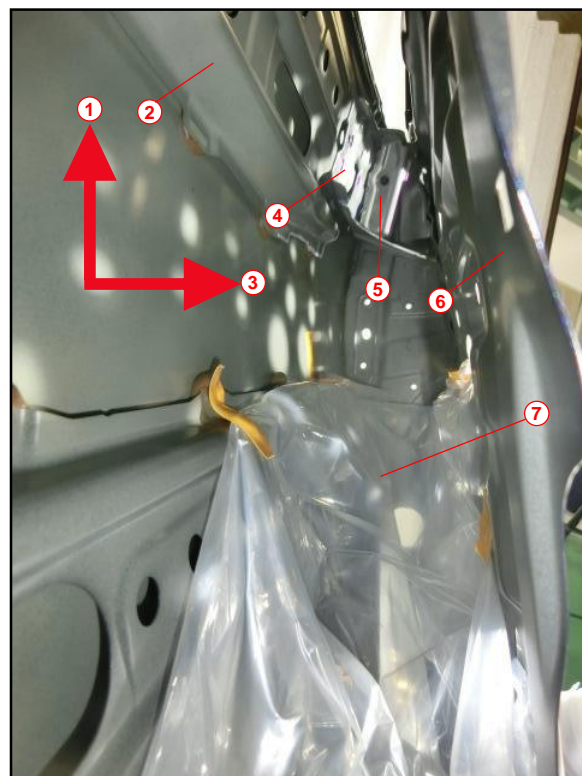
4. Install the NEW inner door mirror reinforcement bracket extension to the door panel.

Refer to the instruction video link:

[Bracket Installation Instruction Video](#)

- A. Door preparation: Cover the inside door structure with a plastic film cover or newspaper to prevent 3M™ bonding adhesive from dripping on the door wire harness, speakers, water drain holes, window glass, etc.

**Figure 5. Inner Door Panel Diagram**



<b>1</b>	<b>Up</b>
<b>2</b>	<b>Outer Reinforcement</b>
<b>3</b>	<b>In</b>
<b>4</b>	<b>Mirror Reinforcement</b>
<b>5</b>	<b>Bulkhead</b>
<b>6</b>	<b>Inner Panel</b>
<b>7</b>	<b>Plastic Film Cover</b>

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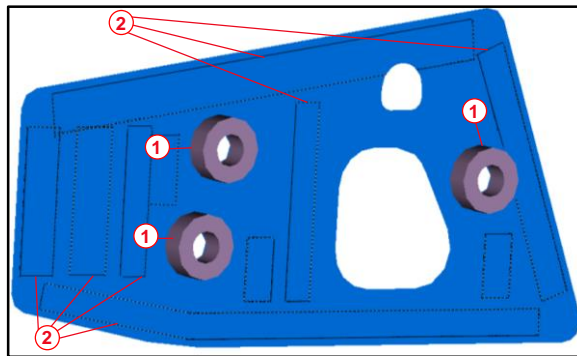
### Repair Procedure (continued)

- B. Apply 3M™ panel bonding adhesive (3M-08115) to the mirror reinforcement bracket extension.

#### NOTE

- The scribe lines on the part are for adhesive application areas (bead width) and location as shown in Figure 6.
- Adhesive thickness (height) **MUST** be higher than the welded washer height to ensure proper bonding as shown in Figure 7.
- The recommended 3M adhesion cure time is 90 minutes for work time.
- The recommended 3M adhesion permanent set or fully cure time is 24 hours.

**Figure 6.**



1	Welded Washer
2	Scribe Line for Adhesive Application Range

**Figure 7.**



1	Adhesive Thickness
2	Washer Thickness

- C. Install the mirror reinforcement bracket extension to the door panel.
- (1) Tighten to the torque requirement to secure the outer rear-view mirror to the reinforcement bracket extension.

**Torque: 7 N\*m (71.38 kgf\*cm, 61.95 in\*lbf / ft\*lbf)**

#### NOTE

- Make sure to tighten nuts to the torque specification (7.0 N/m).
- The recommended 3M adhesion cure time is 90 minutes for work time.
- The recommended 3M adhesion permanent set or fully cure time is 24 hours.

**Figure 8.**



1	New Reinforcement Bracket Extension
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### Repair Procedure (continued)

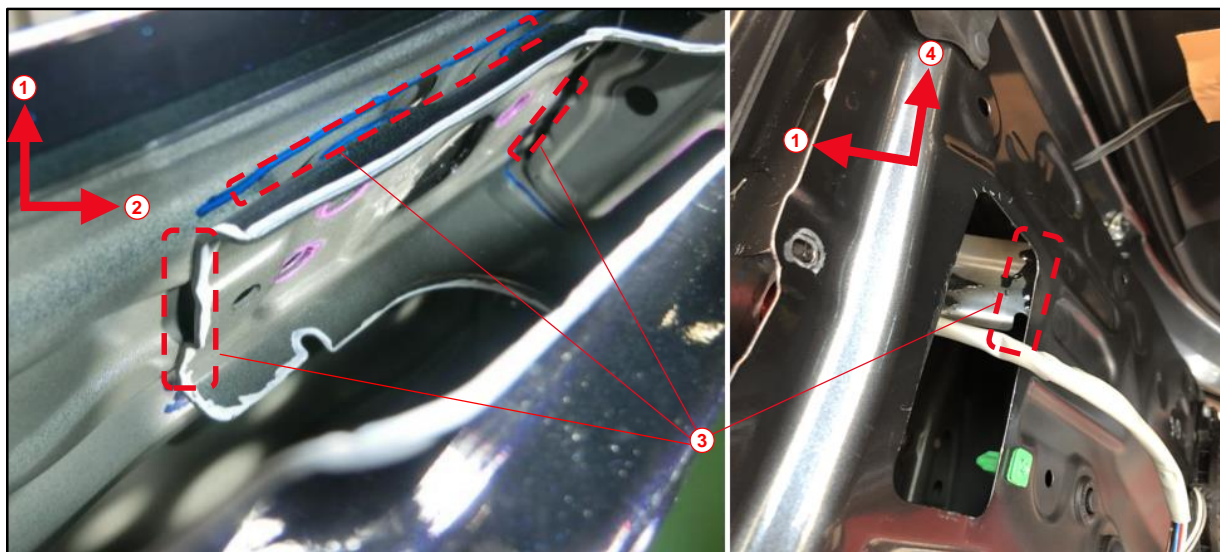
5. Apply 3M™ panel bonding adhesive (3M-08115) to the surrounding areas of the mirror reinforcement bracket.

Apply adhesive to the connected areas between the mirror reinforcement bracket extension and door panel as highlighted in Figure 9.

#### NOTE

Figure 9 shows the adhesive application location for the door reinforcement assembly without the new mirror reinforcement bracket extension installed for enhanced visualization of the area. When performing the repair, the mirror reinforcement bracket extension should already be installed, as shown in Figure 8.

**Figure 9. Locations to Apply Adhesive**



1	Up
2	In
3	Apply Adhesive
4	Front

## Outer Rear View Mirror Image Vibration While Driving

### Repair Procedure (continued)

Figure 10 shows an example of a completed assembly condition (with the extension plate and applied adhesive).

**Figure 10. Completed Assembly Condition**



<b>1</b>	<b>Applied Adhesive</b>
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6. Re-install the door panel.

Refer to TIS, applicable model and model year Repair Manual:

- 2019 – 2021 RAV4:  
Vehicle Exterior – Mirror (Ext) – [“Mirror \(Ext\): Outer Rear View Mirror: Installation”](#)
- 2019 – 2021 RAV4 Hybrid:  
Vehicle Exterior – Mirror (Ext) – [“Mirror \(Ext\): Outer Rear View Mirror: Installation”](#)

7. Repair confirmation steps:

#### **NOTICE**

**The vehicle MUST sit for 24 hours AFTER the repair to ensure proper curing and adhesion of the bonding material. Otherwise, the repair will NOT be effective.**

- A. Open and close the door to confirm the overall shaking/vibrating condition of the mirror.
- B. Test-drive the vehicle to confirm the effectiveness of the repairs.